



6AT6

# TWIN DIODE—HIGH-MU TRIODE

7-PIN MINIATURE TYPE

6AT6

## GENERAL DATA

### Electrical:

Heater, for Unipotential Cathode:

Voltage . . . . .	6.3	ac or dc volts
Current . . . . .	0.3	amp

Direct Interelectrode Capacitances:

	Without External Shield	With External Shield <sup>0</sup>	
Grid to triode plate. . . . .	2.0	2.0	$\mu\text{f}$
Grid to cathode and heater. . .	2.2	2.2	$\mu\text{f}$
Plate to cathode and heater. . .	0.8	1.2	$\mu\text{f}$
Plate of diode unit No.2 to triode grid. . . . .		0.04 max.	$\mu\text{f}$

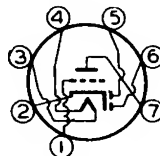
### Characteristics, Class A<sub>1</sub> Amplifier (Triode Unit):

Plate Voltage . . . . .	100	250	volts
Grid Voltage. . . . .	-1	-3	volts
Amplification Factor. . . . .	70	70	
Plate Resistance (Approx.). . . .	54000	58000	ohms
Transconductance. . . . .	1300	1200	$\mu\text{mhos}$
Plate Current . . . . .	0.8	1	ma

### Mechanical:

Mounting Position . . . . .	Any
Maximum Overall Length. . . . .	2-1/8"
Maximum Seated Length . . . . .	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip)	1-1/2" $\pm$ 3/32"
Maximum Diameter. . . . .	3/4"
Dimensional Outline . . . . .	See General Section
Bulb. . . . .	T-5-1/2
Base. . . . .	Small-Button Miniature 7-Pin (JETEC No. E7-1)
Basing Designation for BOTTOM VIEW. . . . .	7BT

Pin 1 - Triode Grid  
Pin 2 - Cathode  
Pin 3 - Heater  
Pin 4 - Heater



Pin 5 - Diode  
Plate No. 2  
Pin 6 - Diode  
Plate No. 1  
Pin 7 - Triode Plate

## TRIODE UNIT—AMPLIFIER - Class A<sub>1</sub>

### Maximum Ratings, Design-Center Values:

PLATE VOLTAGE. . . . .	300 max.	volts
GRID VOLTAGE:		
Positive bias value. . . . .	0 max.	volts
PLATE DISSIPATION. . . . .	0.5 max.	watt
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	90 max.	volts
Heater positive with respect to cathode.	90 max.	volts

<sup>0</sup> With external shield JETEC No. 316 connected to cathode.

← Indicates a change.

SEPT. 1, 1955

TUBE DIVISION  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA

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## TWIN DIODE—HIGH-MU TRIODE

→ **Typical Operation as Resistance-Coupled Amplifier:**

See *RESISTANCE-COUPLED AMPLIFIER CHART No. 7*  
at front of this Section

→ **DIODE UNITS**

**Maximum Ratings, Design-Center Values:**

PLATE CURRENT (For each diode). . . . . 1.0 max. ma

**Diode Considerations:**

Consideration of these units, including typical circuits and diode curves, is given at the front of this Section. Diode biasing of the triode unit of the 6AT6 is not suitable.

→ Indicates a change.

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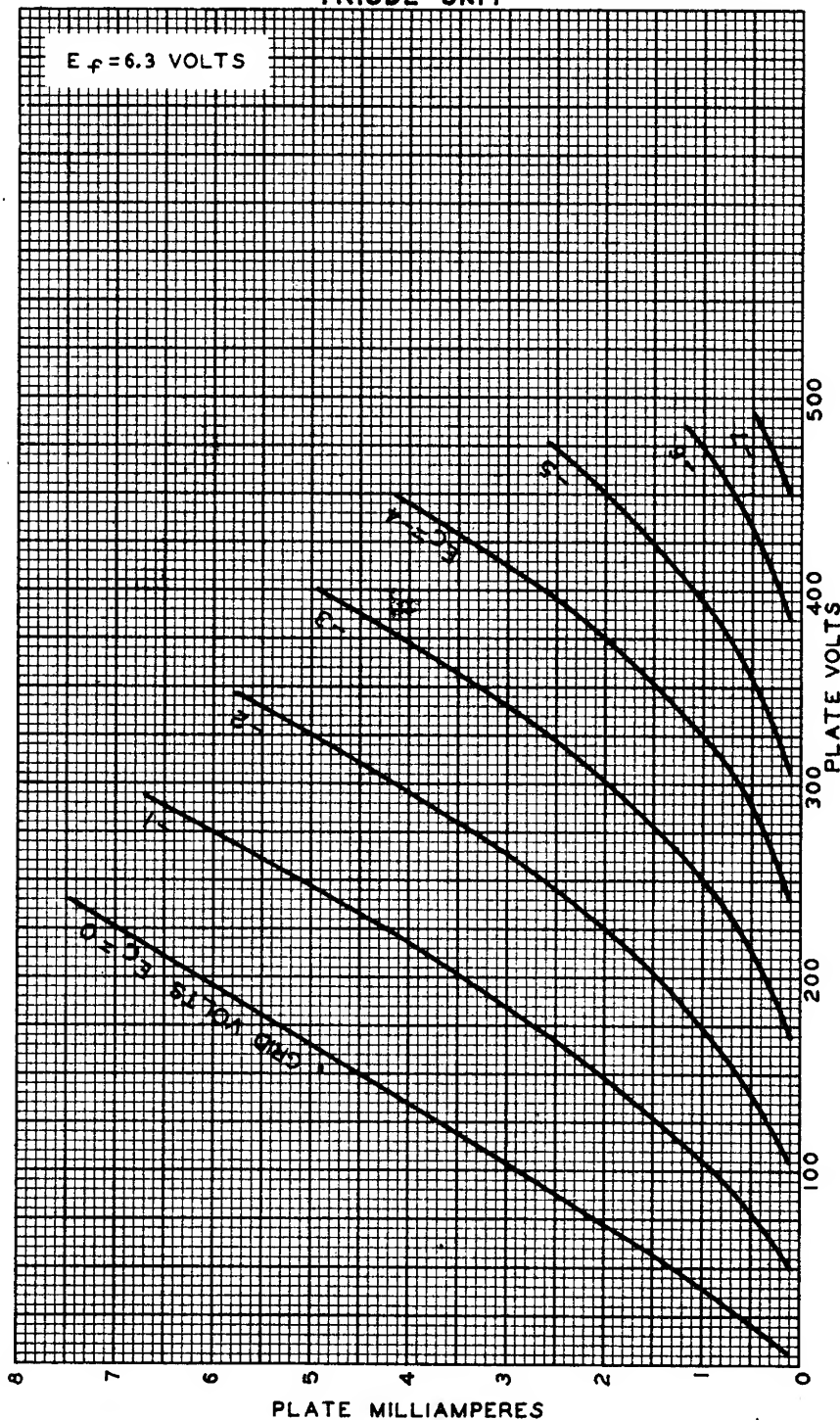


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# AVERAGE PLATE CHARACTERISTICS TRIODE UNIT

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$E_f = 6.3$  VOLTS



OCT. 19, 1945

RCA VICTOR DIVISION  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6610